Docket No.: 64098-0775
AP9464
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Oliver Hecker, et al.

Application No.: 09/530,156

Filed: August 25, 1999

For: Method of Operating Braking Assisted Systems

Confirmation No.: 3844

Art Unit: 3683

Examiner: M. Burch

RECEIVED
DEC 0 8 2003
GROUP 360

BRIEF ON APPEAL

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This brief is in furtherance of the Notice of Appeal, filed in this case on September 15, 2003.

The fees required under § 1.17(f) and any required petition for extension of time for filing this brief and fees therefor, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief is transmitted in triplicate.

This brief contains items under the following headings as required by 37 C.F.R. § 1.192 and M.P.E.P. § 1206:

I.	Real Party In Interest
II	Related Appeals and Interferences
III.	Status of Claims
IV.	Status of Amendments
V.	Summary of Invention
VI.	Issues
VII.	Grouping of Claims

I.   REAL PARTY IN INTEREST

The real party in interest for this appeal is:

Continental Teves AG & Co. OHG of Frankfurt, Federal Republic of Germany

II.   RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III.   STATUS OF CLAIMS

A.   Total Number of Claims in Application

Claims 1, 10, and 17-19 are pending in the application and are involved in this Appeal. Claim 1 is an independent claim and Claims 10 and 17-19 ultimately depend from Claim 1. The present application was filed on April 25, 2000 with a Preliminary Amendment that cancelled originally-filed claims 2 through 9. In response to a first Office Action dated June 11, 2001 (Paper No. 6), Claim 1 was amended and Claims 10-19 were added. In response to a final Office Action dated October 16, 2001 (Paper No. 9), and an Advisory Action dated February 15, 2002 (Paper No. 12), Applicants filed a Request for Continued Examination and an Amendment Under 37 CFR 1.111 amending Claims 1, 10-11 and 13-19 and canceling Claim 12. In response to a first Office Action of the RCE dated April 18, 2002 (Paper No. 15), Applicants amended Claims 1, 13, 15 and 16 and cancelled claim 14. In response to a final Office Action of the RCE dated October 21, 1002 (Paper No. 17), Applicants amended Claims 1, 13, and 20 and cancelled claims 15 and 21. In response to the Office Action dated January 21, 2003 (Paper No. 19), Applicants amended claims 1 and 17-19, and cancelled claims 11, 13, 15, 16, 20 and 21. In response to the final Office Action dated June 16, 2003 (Paper No. 21), Applicants amended Claim 1. In response to the Advisory Action dated August 27, 2003 (Paper No. 23), Applicants filed the Notice of Appeal. No claims have been allowed.

B.   Current Status of the Claims

    1.   Claims canceled: 2-9, 11-16 and 20

    2.   Claims withdrawn from consideration but not canceled: None

    3.   Claims pending: 1, 10 and 17-19

    4.   Claims allowed: None

    5.   Claims rejected: 1, 10 and 17-19

C.   Claims On Appeal

The claims on appeal are claims 1, 10 and 17-19

IV.   STATUS OF AMENDMENTS

Applicants filed an Amendment After Final Rejection on August 8, 2003. The Examiner responded to the Amendment After Final Rejection in an Advisory Action mailed August 27, 2003. In the Advisory Action, the Examiner indicated that Applicants' proposed amendments to claims 1, 10 and 17-19 would not be entered. Accordingly, the claims enclosed herein as Appendix A incorporate the amendments indicated in the paper filed by Applicants in response to the Office Action dated January 21, 2003.

V.   SUMMARY OF INVENTION

In order to achieve the shortest possible stopping distance of an automobile in an emergency braking situation, it may be necessary to increase the brake pressure beyond the pressure requested by the driver through actuation of the brake pedal. Studies have shown that, in emergency brake situations, drivers often cannot, or only after a significant delay, induce the required brake pressure through actuation of the brake pedal alone. To overcome this problem, so-called "brake assistant systems" have been developed that automatically raise the wheel brake pressure above the level requested by the driver in critical driving situations, such as during emergency braking.

One such brake assistant system is disclosed in German Patent DE 40 28 290 C1 ("the '290 reference). In the '290 reference, wheel brake pressure is automatically increased to a level

that achieves optimum vehicle deceleration when an emergency braking event is triggered (e.g., when the actuation force of the break pedal exceeds a predetermined threshold value. To ensure that the excessively raised brake pressure is reduced when the necessity of an emergency braking event is eliminated, it is verified, according to the teaching of the '290 reference, whether the actuation force of the brake pedal is less than a predetermined threshold value. A condition where the actuation force of the brake pedal is less than a predetermined threshold value results in an abrupt termination of the support provided by the brake assistant system. A diminution in the assist pressure according to a simple time-dependent function, however, yields the limitation that the behavior of the system goes beyond the driver's understanding. This is the case, for instance, when the brake effect fades despite keeping the pedal force constant.

The present invention avoids the limitations of the prior art by avoiding an abrupt termination of the brake support. According to the present invention, the excess elevation of the brake force caused by the automatic brake assistant is controllably diminished. In an embodiment of the invention, a brake assistant system is provided that includes three modes of operation, which are depicted adjacent this paragraph in Figure 3. In a first or "Passive" mode or operation, the brake assistant function is not active. As soon as an emergency braking situation is detected, such as a relatively rapid application of the brake pedal, the brake assistant system changes over into a second mode of operation entitled "Total Pressure Build-up." In this mode, the wheel brake pressure is elevated relative to the master cylinder pressure by means of a return pump and suitable control of separating and switch-over valves.
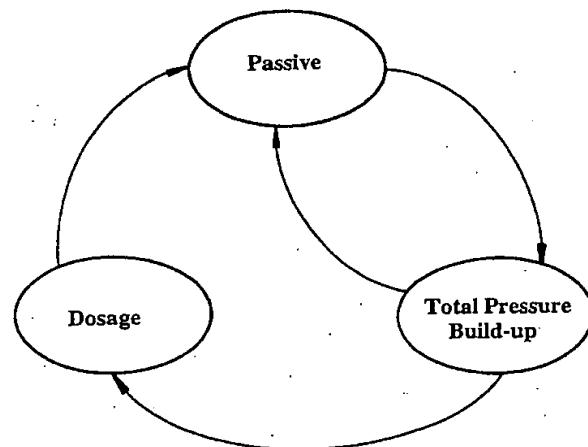

Fig. 3

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From the second mode of operation, a change can be made back into the first or "Passive" mode of operation, or into a third or "Dosage" mode of operation. In the third or "Dosage" mode of operation, the excessive elevation in the wheel brake pressure is gradually diminished, or even increased again, in dependence on the driver's intention after termination of the emergency brake support. In this way, a comfortable transition is provided between the maximum support provided during the emergency brake situation and the conventional brake behavior of the "Passive" mode of operation. Entry into the third or "Dosage" mode of operation may occur, for example, if the force applied to the brake pedal is significantly reduced or by some other recognition of a driver's intention of a controlled diminution of the brake assistant force.

As shown in Figure 1 adjacent this paragraph, a possible pressure course $p_{TMC}(t)$ of master cylinder pressure is schematically depicted during the third or "Dosage" mode of operation. The master cylinder pressure $p_{TMC}(t)$ is, due to the actuation of the brake assistant function, significantly less than the wheel brake pressure $p_{WHEEL}(t)$ during entry into the "Dosage" mode (see t_0). The exemplar pressure course $p_{TMC}(t)$ schematically depicted in Figure 1 is the result of driver input by means of actuation of a brake pedal.

Fig. 1

Fig. 2

According to the invention, the wheel brake pressure $p_{WHEEL}(t)$ is dependent on the measured master cylinder pressure $p_{TMC}(t)$ during the third or "Dosage" mode of operation. In an embodiment, a functional correlation for controlling the wheel brake pressure $p_{WHEEL}(t)$ is: $p_{WHEEL}(t) = K(t) * p_{TMC}(t)$; where $K(t)$ is a time dependent excess elevation function. An exemplar course of the time-dependent excess elevation function $K(t)$, which may also be called a pressure amplification factor, is schematically depicted in Figure 2. According to an embodiment of the invention, in phases in which the master cylinder pressure $p_{TMC}(t)$ is constant or rises, $K(t)$ is constant. Alternatively, in phases in which $p_{TMC}(t)$ declines, $K(t)$ declines as
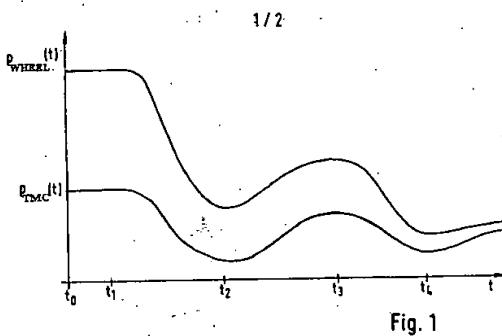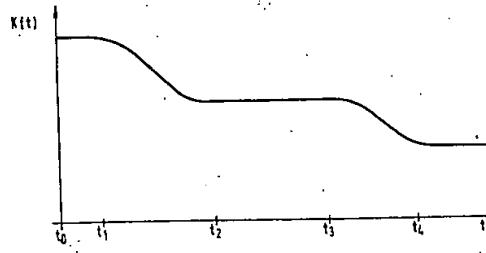
well. As shown in Figure 2, $K(t)$ is substantially constant in the interval from t_0 to t_1. In the interval from t_1 to t_2, $K(t)$ declines to a value $K(t_2)$. In the interval from t_2 to t_3, $K(t)$ is substantially constant. In the interval from t_3 to t_4, $K(t)$ declines to a value $K(t_4)$. As of the point in time t_4, $K(t)$ is constant for all $t > t_4$. Therefore, during the third mode of operation, the course of $K(t)$ is a sequence of declining plateaus corresponding to the oscillations of the master cylinder pressure $p_{TMC}(t)$. The plateaus themselves are substantially characterized by phases of rising or constant master cylinder pressure $p_{TMC}(t)$. The plateaus are connected by declining line segments that substantially correspond to phases of declining master cylinder pressure $p_{TMC}(t)$.

Advantageously, the rate at which support of the brake assistant system is diminished, *i.e.*, the derivative $K'(t)$, increases according to its absolute value the longer and the more distinctly the driver diminishes the brake pedal force. For example, if the interval between t_1 and t_2 increased, *i.e.* if the driver diminished the pedal force over a longer period of time, the inclination of $K(t)$ would increase.

In the illustrated embodiment, a maximum value for $K(t)$ is initially pre-set at time t_0 to avoid implausible wheel brake pressure elevations. During the entire third or "Dosage" mode of operation, the value of $K(t)$ is greater than a predetermined value, for otherwise no further brake support is required and the system changes into the first or "Passive" mode of operation. Optionally, the momentary value of the excess elevation function $K(t)$ may depend on the previous course of the master cylinder pressure. The consideration of the history of the master cylinder pressure is particularly useful for estimating the driving situation and the driver's intention.

In sum, every diminution of the induced brake force effects a reduction of the excess elevation, and every other input via the brake pedal affects the wheel brake pressure but not the excess elevation. In this way, the brake assistant support can be diminished in a manner unnoticeable to the driver.

VI.   ISSUES

Are claims 1, 10 and 17-19 unpatentable under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,027,182 to Nakanishi et al. (hereinafter "Nakanishi")?

VII.   GROUPING OF CLAIMS

For purposes of this appeal brief only, independent Claim 1 is separately patentable and dependent Claims 10 and 17-19 stand or fall with independent Claim 1.

VIII.   ARGUMENTS

Independent Claim 1 specifies, *inter alia*, a method of operating a brake assistant system, which comprises a first mode of operation in which the brake assist system is not actuated, a second mode of operation in which after recognition of an emergency brake situation a pressure build-up of wheel brakes is generated, and a third mode of operation which is provided for the transition from the second into the first mode of operation. Among other features, the claimed method includes the steps of: (i) determining when the wheel brake pressure is excessively elevated compared to the monitored master cylinder pressure; and (ii) controlling the amount of excess elevation by functionally correlating the wheel brake pressure with the monitored master cylinder pressure throughout the duration of the third mode of operation. The claimed controlling step further includes determining a momentary value of the wheel brake pressure by multiplying a momentary value of a time-dependent excess elevation function with a momentary value of the master cylinder pressure throughout the duration of the third mode of operation. Additionally, the claimed controlling step includes the limitation of keeping the excess elevation function constant in time intervals in which the master cylinder is increasing.

The Examiner rejected Claim 32 stating:

> "Nakanishi et al. show in figure 3 a method of operating a brake assist system which comprises a first mode as labeled in the attached copy of figure 3 in which the brake assist system is not actuated, a second mode of operation as labeled in the attached copy of figure 3 in which after recognition of an emergency brake situation a pressure build-up of wheel brakes is generated, and a third mode of operation labeled in the attached copy of figure 3 which is provided for the transition from the second into the first mode of operation, comprising the steps of: monitoring the wheel brake pressure in the third mode of operation as disclosed in col. 17 lines 63-65, determining when the monitored wheel brake pressure is excessively elevated compared to the tandem master cylinder pressure, and controlling the amount of excess elevation by functionally correlating the wheel brake pressure with the monitored master cylinder pressure throughout the duration of the third mode of operation as inferred in col. 17 line 66-col. 18 line 8. Examiner notes that Nakanishi et al. show throughout the duration of the third mode as the controlling step further

including the step of determining a momentary value of the wheel brake pressure by multiplying a momentary value of a time-dependent excess function with the momentary value of the master cylinder pressure. As discussed in the specification of the instant application pwheel(t) = K(t) * pmc(t) or pwheel(t) / pmc(t) = K(t). Examiner maintains that the ratio of pwheel(t) / pmc(t) is inherently shown throughout the duration of the third mode of operation in Nakanishi et al. since at each time in the graph there is a wheel brake pressure value and a master cylinder pressure value. Nakanishi et al. also show the limitation wherein the controlling step further includes keeping the excess elevation function constant in time intervals in which the master cylinder is increasing as shown in figure 3 in the portion of the third mode in the area of the encircled number 2."

Paper 21, pp. 2-4.

An Examiner-modified version of Figure 3 is as follows:
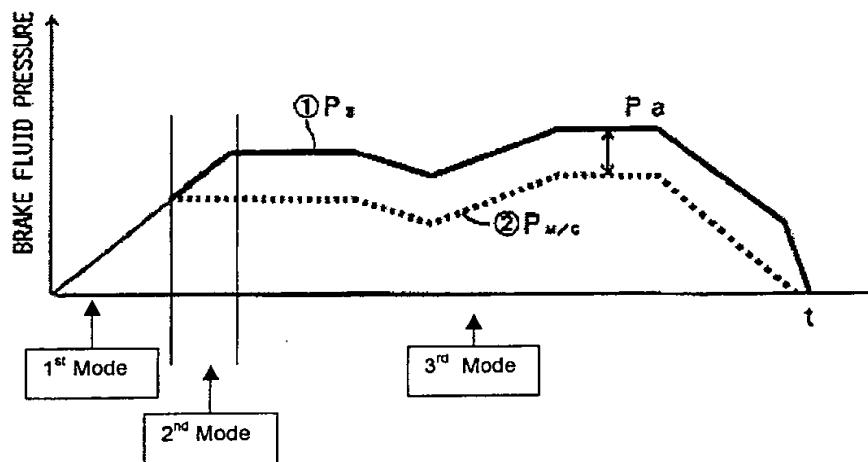
Paper 21, p.3.

Column 13, line 30 - Column 14, line 7 of Nakanishi states the following:

"FIG. 3 is a graph showing a change (a solid line 1) in the brake fluid pressure P_B and a change (a dotted line 2) in the master cylinder pressure $P_{M/C}$ when the BA control is performed. As mentioned above, when the BA control is being performed, the brake fluid pressure P_B which is higher than the master cylinder pressure $P_{M/C}$ by the relief pressure of the relief valve 32 is generated. Accordingly, as shown in FIG. 3, the brake fluid pressure P_B in the high-pressure passage 30 is always controlled to be a pressure higher than the master cylinder pressure $P_{M/C}$ when the BA control is being performed.

When the brake fluid pressure P_B which is higher than the master cylinder pressure $P_{M/C}$ by the assist pressure Pa is introduced into the high-pressure passage 30, a deceleration which is greater than a deceleration which is generated when the master cylinder pressure $P_{M/C}$ is introduced into the high-pressure passage 30 is generated. Hereinafter, the deceleration generated in response to the master cylinder pressure $P_{M/C}$ is referred to as a normal deceleration G0, and the deceleration generated by the assist pressure Pa is referred to as an assist deceleration Ga.

In the present embodiment, the assist pressure Pa (that is, the relief pressure) is set to a value by which the assist deceleration Ga is 0.3 G. Accordingly, when the BA control is being performed, a deceleration greater than the normal deceleration G0 by about 0.3 G is generated in the vehicle. The normal deceleration G0 fluctuates due to increase and decrease in the master cylinder pressure $P_{M/C}$, that is, increase and decrease in a magnitude of a brake operation by the driver. Thus, according to the brake force control apparatus of the present embodiment, a deceleration of the vehicle can be increased or decreased according to the driver's intention while maintaining a substantially constant assist deceleration Ga when the BA control is being performed.

In the present routine, if it is determined, in step 90, that the BA end condition is established, the process of step 92 is performed next.

In step 92, the master cut valve 28 is opened (off state), the inlet valve 78 is closed (off state) and the pump 76 is turned off. After the process of step 92 is performed, the brake force control apparatus returns to the normal state as shown in FIG. 1, that is, a state in which a function of a normal brake is achieved. After the process of step 92 is completed, the routine is ended." (emphasis added)

As the highlighted sections above emphasize, Nakanishi teaches that the assist pressure (Pa) is terminated by opening the master cut valve 28, closing the inlet valve 78 and turning off the pump 76. (*See* Col. 13, line 65 through Col. 14, line 7). In other words, like the '290 reference described above, the assist pressure (Pa) in Nakanishi is abruptly terminated without any controlled diminution, rather than by functionally correlating the wheel brake pressure with the monitored master cylinder pressure as claimed by the Appellants.

However, even assuming, *arguendo*, that Nakanishi discloses functionally correlating the wheel brake pressure with the monitored master cylinder pressure, Nakanishi still does not disclose determining a momentary value of the wheel brake pressure by multiplying a momentary value of a <u>time-dependent excess elevation function</u> (K(t)) with a momentary value

of the master cylinder pressure, as claimed by the Appellants. Instead, during the Examiner-labeled "3rd mode" of Figure 3 shown above, the assist pressure Pa is set to a value by which the assist deceleration Ga is 0.3 G. Thus, in Nakanishi, a deceleration of the vehicle can be increased or decreased according to the driver's intention while maintaining a substantially constant assist deceleration Ga. In other words, the wheel brake pressure in Nakanishi is determined by multiplying the master cylinder pressure with a <u>constant</u>, rather than a time-dependent excess elevation function, as claimed by the Appellants.

Moreover, the portion of Figure 3 shown above that is labeled "3rd mode" by the Examiner is actually the brake assistant control mode. (*See*, col. 13, lines 29-50). As shown in the Examiner-modified Figure 3, the assist pressure Pa is set to a constant value by which a predetermined assist deceleration Ga is achieved. It is only after determination of the brake assist end condition (step 90) that a transition from the second "brake assistant" mode into the first or "Passive" mode takes place, and even then the assist pressure Pa is not controlled by multiplying a momentary value of a *time-dependent excess elevation function* with a momentary value of the master cylinder pressure throughout the duration of the third mode of operation. For at least the above reasons, Nakanishi is not identical to the claimed invention.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently, in a single prior art reference. *See MPEP §2131.* Contrary to the Examiner's contention that all of the limitations of Claim 1 are disclosed in Nakanishi, at least the steps of <u>functionally correlating the wheel brake pressure with the monitored master cylinder pressure throughout the duration of a third mode of operation</u> *and* <u>determining a momentary value of the wheel brake pressure by multiplying a momentary value of a time-dependent excess elevation function with a momentary value of the master cylinder pressure throughout the duration of the third mode of operation</u>, are not disclosed, taught or suggested in Nakanishi. Accordingly, the §102 rejection is unsupported by the art and should be withdrawn. Claims 10 and 17-19, which depend from Claim 1, are likewise allowable over the applied art.

IX.   CLAIMS INVOLVED IN THE APPEAL

A copy of the claims involved in the present appeal is attached hereto as Appendix A.

CONCLUSION

For the above reasons, Appellants respectfully submit that Claims 1, 10 and 17-19 are patentable over the applied art. Therefore, the Board is respectfully requested to reverse the Examiner's decision.

Dated: _11/12/03_

Respectfully submitted,

By_____

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APPENDIX A

Claims Involved in the Appeal of Application Serial No. 09/530,156

1. A method of operating a brake assistant system which comprises a first mode of operation in which the brake assist system is not actuated, a second mode of operation in which after recognition of an emergency brake situation a pressure build-up of wheel brakes is generated, and a third mode of operation which is provided for the transition from the second into the first mode of operation, comprising the steps of:

monitoring the master cylinder pressure in the third mode of operation,

determining when the wheel brake pressure is excessively elevated compared to the monitored master cylinder pressure, and

controlling the amount of excess elevation by functionally correlating the wheel brake pressure with the monitored master cylinder pressure throughout the duration of the third mode of operation, wherein the controlling step further includes determining a momentary value of the wheel brake pressure by multiplying a momentary value of a time-dependent excess elevation function with a momentary value of the master cylinder pressure throughout the duration of the third mode of operation and wherein said controlling step further includes keeping the excess elevation function constant in time intervals in which the master cylinder is increasing.

17. The method according to claim 1, wherein the momentary value of the excess elevation function is a function of a previous course of the master cylinder pressure.

18. The method according to claim 1, further including the step of presetting a maximum value for the excess elevation function.

19. The method according to claim 1, further including the step of changing the brake assistant system from the third mode of operation into the first mode of operation when the excess elevation function substantially has a value equal to 1.

TRANSMITTAL OF APPEAL BRIEF	Docket No. 64098-0775

In re Application of:	Oliver Hecker, et al.		

Application No. 09/530,156-Conf. #3844	Filing Date August 25, 1999	Examiner M. Burch	Group Art Unit 3683

Invention: Method of Operating Braking Assisted Systems

TO THE COMMISSIONER OF PATENTS:

Transmitted herewith in triplicate is the Appeal Brief in this application, with respect to the Notice of Appeal filed: September 15, 2003 .

The fee for filing this Appeal Brief is ___330.00___ .

[x] Large Entity   [ ] Small Entity

[ ] A check in the amount of _____ is enclosed.

[x] Charge the amount of the fee to Deposit Account No. ___18-0013___
This sheet is submitted in duplicate.

[ ] Payment by credit card. Form PTO-2038 is attached.

[x] The Director is hereby authorized to charge any additional fees that may be required or credit any overpayment to Deposit Account No. ___18-0013___ .
This sheet is submitted in duplicate.

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Dated: November 12, 2003

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FEE TRANSMITTAL
for FY 2004

Effective 10/01/2003, Patent fees are subject to annual revision.

Complete if Known	
Application Number	09/530,156-Conf. #3844
Filing Date	August 25, 1999
First Named Inventor	Oliver Hecker
Examiner Name	M. Burch
Art Unit	3683
Attorney Docket No.	64098-0775

[ ] Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($) 330.00

RECEIVED DEC 0 8 2003

GROUP 360

METHOD OF PAYMENT (check all that apply)

[ ] Check [ ] Credit Card [ ] Money Order [ ] Other [ ] None

[X] Deposit Account:

Deposit Account Number: 18-0013

Deposit Account Name: Rader, Fishman & Grauer PLLC

The Director is authorized to: *(check all that apply)*

[X] Charge fee(s) indicated below [X] Credit any overpayments

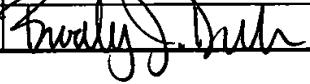[X] Charge any additional fee(s) during the pendency of this application

[ ] Charge fee(s) indicated below, **except for the filing fee**

to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Fee ($)	Small Entity Fee Code	Fee ($)	Fee Description	Fee Paid
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) ($) 0.00

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

	Extra Claims	Fee from below	Fee Paid
Total Claims	-** =	x	=
Independent Claims	-** =	x	=
Multiple Dependent		=	

Large Entity Fee Code	Fee ($)	Small Entity Fee Code	Fee ($)	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple dependent claim, if not paid
1204	86	2204	43	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($) 0.00

** or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Fee ($)	Small Entity Fee Code	Fee ($)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge – late filing fee or oath	
1052	50	2052	25	Surcharge – late provisional filing fee or cover sheet.	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for *ex parte* reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	330.00
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive – unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37CFR 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify)

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) ($) 330.00

SUBMITTED BY

		(Complete (if applicable))	
Name (Print/Type) Bradley J. Diedrich	Registration No. (Attorney/Agent) 47,526	Telephone (248) 594-0651	
Signature		Date November 12, 2003	

Fee Transmittal

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail, in an envelope addressed to: MS Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Dated: November 12, 2003   Signature: _____ (Kathryn L. Nash)